

**Review of the Draft Work Plan, Shoreline Revetment; Site Grading and Consolidation of  
Excavated Soil, Sediment, and Debris; and Upland Slurry Wall Installation,  
Remedial Action, Parcel E-2, Hunters Point Naval Shipyard, San Francisco,  
California, March 2016  
USEPA Comments May, 2016**

**GENERAL COMMENTS**

1. Based on Section 5.5.1.4 (Step Four – Define the Study Boundaries) of the Draft Work Plan, Shoreline Revetment; Site Grading and Consolidation of Excavated Soil, Sediment, and Debris; and Upland Slurry Wall Installation, Remedial Action, Parcel E-2, Hunters Point Naval Shipyard, San Francisco, California, dated March 2016 (Draft Work Plan), the vertical boundary of the project area is “a minimum of 2.5 feet below the planned final grade;” however, Section 3.2 (Remedial Action Objectives) indicates that remedial action objectives apply to:

- Solid waste, soil, or sediment from 0 to 2 feet below ground surface (bgs) by recreational users throughout Parcel E-2;
- Solid waste, soil, or sediment from 0 to 10 feet bgs by construction workers throughout Parcel E-2;
- Solid waste or soil from 0 to 3 feet bgs by terrestrial wildlife throughout Parcel E-2;
- Solid waste or soil from 0 to 3 feet bgs by aquatic wildlife throughout the Shoreline Area; and,
- Radionuclides of Concern for all potentially complete exposure pathways.

As such, it is unclear why the vertical boundary is limited to 2.5 feet below the planned final grade. This is of particular concern given that the planned final grade will be above the ground surface used during the remedial action (RA) presented in this Draft Work Plan. Please revise the Draft Work Plan to clarify why the vertical boundary of the project area is a minimum of 2.5 feet below the planned final grade.

2. Section 6.4 (Mobilization) indicates that a decontamination pad will be constructed using two 20-mil layers of high-density polyethylene or polyvinyl chloride liner, or equivalent design, to prevent any contaminated soil from coming into contact with the native soil; however, it is unclear how this will be confirmed without pre- and post-RA confirmation sampling. Similarly, it is unclear how it will be confirmed that contaminated soil did not come into contact with native soil at the radiological screening yard (RSY) pads and waste consolidation area for radiologically cleared materials without pre- and post-RA scanning and/or confirmation sampling. Please revise the Draft Work Plan to include pre- and post-RA confirmation sampling of the decontamination pad and all material handling and storage areas.
3. The Draft Work Plan does not discuss the need to minimize the potential for dust during evenings, weekends, or holidays. While it is understood that water trucks will be used to mist dry soil and debris during excavation and segregation and a chemical soil stabilizer

will be applied to stockpiles, please revise the Draft Work Plan to clarify how dust will be minimized during evenings, weekends, and holidays.

4. The Draft Work Plan indicates that saturated soil cannot be radiologically surface screened; however, it is unclear if the misting of dry soil and debris during excavation and segregation to minimize the potential for dust will affect the screening. Please revise the Draft Work Plan to specify when misting of dry soil and debris will be conducted during excavation and segregation to minimize the potential for dust in a manner that will not interfere with the in-situ radiological scans.
5. Sections 7.1.7 (Soil Placement and Compaction) and 7.5 (Construction of Foundation Soil Layer) state, "Density testing of shallow soil by nuclear methods (ASTM D 6938) will be conducted at a frequency of 1/10,000 square feet per lift, as stated in the Testing Plan and Log (Attachment 7 to Appendix E) and DBR Specification 31 00 00 Earthwork Part 3.6.3.2 (ERRG, 2014). Sand cone testing (ASTM D 1556) and moisture testing (ASTM D 2216) will be conducted at a frequency of 1/150,000 square feet per lift (minimum of one per day) as confirmation of the nuclear gauge results as stated in the Testing Plan and Log (Attachment 7 to Appendix E). The CQCP (Appendix E of this Work Plan) describes the compaction, density, and moisture testing requirements;" however, this information is inconsistent with the information presented in Appendix E (Contractor Quality Control Plan) and Attachment 8 (Testing Plan and Log) of Appendix E. For example, Attachment 8 of Appendix E indicates that compaction testing of general backfill, revetment materials and slurry wall backfill testing will occur at a frequency of 1 per 5,000 cubic yards or change in material, rather than 1 test per 10,000 square feet per lift. The ASTM method for compaction, listed in Attachment 8 of Appendix E, is ASTM-D1557, not ASTM D 6938. Similarly, Attachment 8 of Appendix E indicates that the moisture content testing of general backfill and slurry mix design will only occur at a frequency of 1 per 150,000 square feet but does not mention the collection of a minimum of one sample per day. Please revise the Draft Work Plan to present consistent information.
6. Section 7.3.2.1 [French Drain Outlet (Inlet Structure to Freshwater Wetland)] indicates that the isolation valve on the French drain outlet can be used to prevent water discharge into the freshwater wetlands if chemical concentrations in the water exceed criteria; however, it is unclear if use of the isolation valve will cause water to become backlogged within the French drain pipe and ultimately saturate soil adjacent to the upland slurry wall or travel along the permeable backfill to the vicinity of the upland wetland excavation. As noted in Section 7.3.1 (Upland Slurry Wall), the upland slurry wall is considered a "hanging" slurry wall and is not keyed into an aquitard. As such, over saturation of soil adjacent to the upland slurry wall could cause unwanted water to flow through the landfill waste, increasing the rate of leachate generation. Further, the actions that will be taken and the decision criteria that will be used to address the water imitating from the French drain outlet in excess of water criteria is not provided and/or referenced. Please revise the Draft Work Plan to discuss the ramifications associated with the use of the isolation valve. In addition, please provide the actions that will be taken and the decision criteria

that will be used to address the water imitating from the French drain outlet in excess of water criteria.

7. Insufficient information is provided in Sampling and Analysis Plan (SAP) Worksheets #11 (Project Quality Objectives/Systematic Planning Process Statements) and #17 (Sampling Design and Rationale) of Appendix B (Draft Sampling and Analysis Plan) regarding step-out over-excavation which will be conducted laterally or vertically as necessary. SAP Worksheet #11 indicates that details regarding the step-out over-excavation are provided in SAP Worksheet #17; however, Section 17.1 (Excavation and Site Grading) of SAP Worksheet #17 only indicates that over-excavation will be conducted and additional confirmation samples will be collected if any confirmation sample exceeds the hot spot goals. Please revise Appendix B to include specific details regarding step-out over-excavation.
8. The SAP in Appendix B of the Work Plan does not consistently present information for the methods and analyses that will be performed for the proposed sampling. The following are examples of the types of inconsistencies that should be corrected:
  - a. The method for the metals analyses is not consistently presented. Worksheet #19 indicates Method 6010 or Method 6020 may be used for soil samples, but information for Method 6020 is not provided elsewhere in the SAP. Worksheet #11 lists Method 6010 for analyses of total lead and copper in confirmation soil and sediment samples and Method 6010B is identified for the backfill soil samples.
  - b. Worksheet #15 does not specify the methods for which the detection limits are presented. For example, it is unclear if the detection limits for the polycyclic aromatic hydrocarbons (PAHs) listed in Worksheet #15.5 for semi-volatile organic compounds (SVOCs) are from Method 8270 or Method 8270 Selected Ion Monitoring (SIM).
  - c. Several worksheets do not include all of the proposed analyses. As one example, Worksheet #23 does not list standard operating procedures (SOPs) for analyses of asbestos by CARB 435. As another example, Worksheet #28 is missing tables for analyses of volatile organic compounds (VOCs) and asbestos.
  - d. Information for the soil and liquid waste characterization analyses is not included in all worksheets. For example, wastewater analyses are not discussed in Worksheet #11. In addition, the soluble threshold limit concentration analyses and toxicity characteristic leaching procedure listed in Section 17.5, Waste Soil Sampling, and Worksheet #18 are not discussed elsewhere in the SAP. Further, detection/reporting limits are not included in Worksheet #15 for solid or liquid waste characterization analyses.
  - e. Section 14.3, Analytical Requirements, lists all possible analyses to be performed for this project, including several analyses for which information is not provided elsewhere in the SAP: isotopic plutonium, isotopic uranium, gross Alpha and Beta by EPA Method 9310, total oil and grease, total suspended solids, total cyanide, chemical oxygen demand, ignitability, and dissolved sulfide.

Please revise the SAP to consistently present information for the proposed methods and analyses for all types of samples.

9. The Appendix B SAP indicates that field duplicate samples will not be collected due to the known heterogeneity of contaminant distribution in the soil matrix (Worksheet #12 and Section 37.2.1). Since decisions at the site will be based on discrete samples, it is necessary to document the observed heterogeneity to verify that reliable decisions can be made based on the results from the discrete samples. Please revise the SAP to include field duplicates for the soil samples. Additionally, please indicate what measures will be taken to reduce the soil sample heterogeneity to ensure reliable decisions can be made.
10. Appendix B SAP Attachment 2, Control Limits, Certifications, Analytical Standard Operating Procedures, states that the SOPs will be provided in the final version only. However, without these SOPs, the adequacy of the laboratory methods cannot be evaluated and the information in the SAP cannot be verified. Further, the laboratory statistically derived quality control (QC) limits are not provided, and instead, Attachment 2 includes control limits from the Department of Defense (DOD) Quality Systems Manual (QSM). While it may be acceptable to use the DOD QSM limits as the measurement performance criteria (MPC), the laboratory QC limits should be provided for all proposed methods to ensure the laboratories can meet the limits in the DOD QSM. Please revise the SAP to include all relevant laboratory-specific SOPs and QC limits.
11. The Appendix B SAP does not specify how representative subsamples will be obtained in the laboratory. Section 37.2.3, Representativeness, states, "Laboratory procedures for sample preparation will ensure that aliquots used for analysis are representative of the whole sample." Please note that the method of stirring the sample in the jar and extracting a volume for analysis is not likely to provide a representative subsample. Therefore, it is recommended that an incremental subsampling procedure or a fractional shoveling technique be implemented. However, no information is provided to explain how representativeness will be ensured. Please revise the SAP to discuss how representative subsamples will be obtained and provide the rationale that explains why this procedure is sufficient.
12. It is unclear if the sediment and soil sample results will be corrected for percent moisture and reported on a dry weight basis. In addition, an SOP for percent moisture determination is not identified in the SAP. Please revise the SAP to indicate that results will be reported on dry weight basis and that these results will be compared to project action limits (PALs). Please also provide the laboratory SOP for the percent moisture determination.
13. Appendix B SAP Worksheets #34-36 indicate a third party data validation company will validate the data, but this company had not been identified. Further, this worksheet indicates validation will be performed in accordance with the validation company's SOPs, but these SOPs are not included in the SAP. Please revise the SAP to identify the third party data validation company and include the data validation SOPs in the SAP.

14. The Appendix B SAP identifies multiple procedures that will be used for data validation. For example, Section 14.7, Data Validation, states that validation will be performed in accordance with the DOD QSM, but also indicates guidance from the National Functional Guidelines (NFG) and Environmental Work Instruction 3EN2.1 – Chemical Data Validation (see Section 14.7.2) will be used. The table in Worksheet #34-36 indicates that validation will be performed in accordance with the third party data validation company's SOPs and the DOD QSM, while the text states that the DOD QSM and the NFG will be used. Since multiple sources are identified for data validation procedures, a data validation checklist or tables describing how samples will be qualified (e.g., the qualifiers that will be used, when samples will be qualified estimated/rejected, and if individual or all samples in a batch will be qualified) should be provided. Please revise the SAP to provide data validation checklists or tables summarizing how results for the applicable analytical methods will be qualified.
15. The data management and reporting discussion is insufficiently detailed in the Appendix B SAP. For example, the SAP does not specify the location and length of time that hard copy project documents and electronic files will be archived. In addition, Section 14.5.2, Electronic Deliverables, discusses data entry and uploading data, but it is unclear if the data entry and uploaded data will be verified. Also, this section does not discuss how data qualifiers will be added to the final reports. Finally, the SAP does not specify what documents will be included in the laboratory data package deliverables for this project (e.g., raw data, manual integrations, etc.). Please revise the SAP to provide greater detail regarding the data management and reporting tasks as per Section 3.5, Data Management Tasks, of the Uniform Federal Policy Quality Assurance Project Plan Manual, dated March 2005 (UFP QAPP Manual).
16. Appendix C (Draft Waste Management Plan) not discuss the EPA off-site rule and how it applies to materials excavated from Parcel E-2. In addition, the Draft Work Plan does not include sufficient provisions to ensure the receiving waste management facilities meet EPA requirements prior to shipment offsite. Periodic verification that the receiving waste management facilities meet EPA requirements prior to shipment offsite should be incorporated into the Draft Work Plan. Similarly, the Region 9 offsite rule expert should be contacted. Please revise the Draft Work Plan to discuss the EPA off-site rule and how it applies to materials excavated from Parcel E-2. In addition, revise the Draft Work Plan to include periodic verification that the receiving waste management facilities meet EPA requirements prior to shipment offsite.
17. Section 6.3.1.1 (Monitoring Site Locations) of Appendix E (Draft Environmental Protection Plan) indicates that a minimum of two air monitoring stations will be installed to collect air samples; one upwind and one downwind station will be monitored for the duration of the field activities. However, monitors will not be moved during a sampling collection period as to not invalidate the collected samples. As such, it is unclear if two air monitoring stations (one upwind and one downwind station) are sufficient to account for shifts in wind direction. Similarly, Section 6.3.1.1 of Appendix E indicates that radiological air monitoring will be conducted both upwind and downwind of the excavation but does not specifically indicate the number of monitoring stations that will

be used. In addition, it is unclear what will occur if excavations are occurring at multiple locations (e.g., along the southern panhandle and along the shoreline), since two monitoring stations would not be sufficient. Please revise the Draft Work Plan to clarify how two air monitoring stations are sufficient to account for shifts in wind direction. In addition, please clarify the number of radiological air monitoring stations will be used.

18. Attachment 1 - License Standard Operating Procedures (SOPs) of Appendix F, Radiation Protection Plan (RPP) indicates that the procedures included are operational procedures; however, the procedures provide general guidelines and references to regulatory requirements but do not include step-by-step instructions for implementing the guidelines referenced therein. The following CB&I Federal Services (CBI) procedures included in Appendix F provide general guidance, but are not sufficient to serve as project-specific SOPs:
- a. Attachment 1, CBI Procedure CMS-710-07-PR-04005, Rev. 2, Radiation Safety Training
  - b. Attachment 1, CBI Procedure CMS-710-07-PR-04013, Rev. 1, Radiation Detection Instrumentation
  - c. Attachment 1, CBI Procedure CMS-710-07-PR-04015, Radiation Safety Staff Credentials
  - d. Attachment 2, CBI Procedure CMS-710-07-PR-04000, Rev. 2, Radiation Safety Program
  - e. Attachment 2, CBI Procedure CMS-710-07-PR-04009, Rev. 1, External Exposure Control and Monitoring
  - f. Attachment 2, CBI Procedure CMS-710-07-PR-04010, Rev. 1, Internal Exposure Control and Monitoring
  - g. Attachment 2, CBI Procedure CMS-710-07-PR-04016, Rev. 1, Procurement, Receipt, Transfer and Inventory of Radioactive Sources
  - h. Attachment 3, CBI Procedure CMS-710-07-WI-04000, Rev. 1 Self-Assessments of the Radiation Protection Plan

Please revise the RPP to include the standard operating procedures that provide work-specific instructions, or reference the location of where these standard operating procedures are located such that the project-specific requirements will be adequately documented and consistently applied and implemented.

19. The gamma instrumentation discussed in Appendix G, Radiological Material Management Plan, Section 2.3.1 (Survey Instrumentation and Calibration) is not suitable for detecting all of the listed radionuclides. The text states that the radiation detection instrumentation and survey types listed are suitable for detecting radium-226, cesium-137, cobalt-60, and strontium-90. Of these radionuclides, cesium-137 and cobalt-60 can be detected in the field using gamma spectroscopy, however the gamma instrumentation listed does not include a multi-channel analyzer for the gamma surveys; therefore it is unclear how individual radionuclide quantities will be quantitatively reported from the gamma scans. Radium-226 is detectable, but field measurements are usually biased low. Strontium-90 cannot be detected using field instrumentation. Further, text in the last

paragraph of this section states that these surveys will be conducted in accordance with other various standard operating procedures. Please revise the RPP to include the specific survey and instrument procedures that will be used for each target radionuclide in order to demonstrate the applicability and detection capability of the gamma survey, as well as the other surveys for gross alpha/beta, exposure rate, and smear counting.

## **SPECIFIC COMMENTS**

1. **Section 7.2.1.2, Step-Out Excavations, Page 7-8:** The text states, “Generally, step-out excavations will not be performed across parcel boundaries;” however, the cases where it could occur are not discussed. Specifically, it is unclear if decision criteria are in place to determine whether excavations should continue across parcel boundaries. Please revise Section 7.2.1.2 to clarify the cases where step-out excavations across parcel boundaries could occur. In addition, please provide the decision criteria that will be used to determine whether excavations should continue across parcel boundaries.
2. **Section 7.2.2, Site Grading to Construct Final Subgrade, Pages 7-9 and 7-10:** According to Section 7.2.2, Parcel E-2 will be graded and the top foot of soil will be stripped from the interim landfill cap to prepare the subgrade to the elevations shown on Figure 6 (Subgrade Excavation Plan); however, the final covers will be constructed under a future RA contract that may not occur for two years or more. As a result, the subgrade will be exposed and subject to erosion until the final cover is installed. This is of particular concern given that vegetated interim cap features will no longer be in place to manage stormwater. While it is understood that disturbed areas will be seeded, it is unclear if the compacted subgrade soil will be amicable to vegetation germination and growth, since topsoil, including the organic and organic-rich surface soil layers that developed in vegetated areas will be removed. In addition, it is unclear if the armored swale in the center of the landfill will be removed. Further, it is it does not appear that these areas will be sufficiently watered to establish the vegetation prior to the rainy season; watering was required to establish vegetation when the interim cap was constructed. Please revise Section 7.2.2 to discuss the sequencing of remedial action components, including clarifying how the leaving an exposed subgrade for an unknown duration of time is appropriate. Also, please clarify if the armored swale will be removed. In addition, please discuss how seeding the subgrade of disturbed areas is appropriate to address stormwater and erosion concerns and whether seeds will be watered to establish vegetation before the rainy season.
3. **Section 7.3.1.1, Compatibility Testing, Page 7-13:** Section 7.3.1.1 indicates that slurry mix design compatibility testing is currently being performed to confirm the requirements for the cement-bentonite (CB) slurry will be achieved with the specified mix and that a compatibility testing report will be provided to the Navy prior to use, but it is unclear why only the Navy will be provided this report. Please revise Section 7.3.1.1 to provide the slurry mix design compatibility testing report to the regulatory agencies [e.g., U.S. EPA, California Department of Toxic Substances Control (DTSC), California Department of Public Health, and the Regional Water Quality Control Board (RWQCB)]

– San Francisco Bay Region] and/or explain why the regulatory agencies will not also be provided the compatibility testing report.

4. **Section 7.3.1.3, Materials, Pages 7-14 to 7-15:** The text indicates that water drawn from a hydrant on the property for use at the slurry mixing plant will be tested for pH, hardness, and total dissolved solids; however, the Draft Work Plan does not discuss this sampling or the criteria to which the results will be compared for acceptance and use. Please revise the Draft Work Plan to discuss the sampling of water drawn from a hydrant on the property for use at the slurry mixing plant and provide the criteria to which the results will be compared for acceptance of use.
5. **Section 7.3.1.5, Excavation and Installation, Pages 7-16 to 7-17:** The text states that, “Spoils from the trench and any excess slurry from the trench removed during the excavation process will be staged temporarily alongside the trench (on the work platform on the landfill side of the trench), or direct-loaded into dump trucks to the RSY pads for radiological processing in accordance with Section 7.1.3 of this Work Plan;” however, the text does not clarify the ultimate disposition of the spoils from the trench. Please revise Section 7.3.1.5 to clarify where the spoils from the trench will be disposed following radiological scanning and confirmation sampling.
6. **Section 7.3.2.1, French Drain Outlet (Inlet Structure to Freshwater Wetland), Page 7-18:** Section 7.3.2.1 does not discuss how the installation of the French drain will be coordinated with the freshwater wetland excavation and construction. Specifically, the sequencing of the freshwater wetland excavation, installation of the French drain, and freshwater wetland construction are not discussed. This is of particular concern should the wetland construction not occur immediately following the excavation and French drain installation resulting in water accumulating within the excavation. Although the text discusses shutting of a valve so that water will not flow through the drain pipe, this will not stop water from flowing through the permeable backfill around the pipe. Please revise Section 7.3.2.1 to discuss the sequencing of the freshwater wetland excavation, installation of the French drain, and freshwater wetland construction. If the wetland construction not occur immediately following the excavation and French drain installation, please revise Section 7.3.2.1 to clarify how water within the excavation will be managed.
7. **Section 7.6, Installation of Monitoring/Extraction Wells and Piezometers, Pages 7-21 and 7-22:** The text indicates that the depth of the screen interval for the monitoring/extraction wells and leachate monitoring/extraction wells will be based on field conditions; however, the decision criteria that will be used to determine the depth of the screen interval in the field are not provided and/or referenced. In addition, Section 7.6 does not specify the targeted screen intervals and/or proposed screen lengths to be used. Please revise Section 7.6 to provide the decision criteria that will be used to determine the depth of the screen interval in the field. Also, please revise Section 7.6 to provide the targeted screen intervals and proposed screen lengths to be used.



8. **Appendix A, Section 2.0, Pre-Construction Focused Biological Surveys, Second Paragraph, Page 2:** It is unclear how thorough the field evaluation for nesting birds and other biological resources would be using 30-foot survey transects because this would require observing the entire area 15 feet to the right and left of each transect. There is potential that some nesting birds, nests, or other biological resources could be overlooked at this distance. In addition, some shorebird eggs may be indistinguishable from rocks and it is unlikely these eggs would be spotted from a distance of 15 feet. Please revise the Work Plan to specify survey transects that are spaced to allow for complete visual observation of nesting birds, nests, eggs, and other biological resources.
9. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #6, Communication Pathways, Pages 18 to 21:** This worksheet does not indicate that regulatory agencies will be notified of significant corrective actions or SAP changes in the field. In addition, the communication procedures do not always specify the timeframe and form of communication for the issues identified as communication drivers (e.g., sampling quality issues). Please revise the table to specify that the regulatory agencies will be notified of significant corrective actions and when changes to the SAP occur. Also, please revise Worksheet #6 to include the timeframe and form of communication for all communication drivers
10. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, Page 34:** Step 1 (Define the Problem that Necessitates the Study) states, “If directed by the Navy, additional excavation to remove methane generating debris or other hot spots may be performed;” however, Section 7.2.1.3 (Extent of Methane-Generating Debris) does not include any provisions regarding awaiting direction from the Navy to proceed with the excavation activities. Section 7.2.1.3 indicates that “If methane-generating debris is present/uncovered in a localized area (that is not associated with organic contamination exceeding the hot spot goals) during excavation activities, then additional excavation will be performed to remove the debris.” Please revise Appendix B to address this inconsistency.
11. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, Page 35:** Step 3 (Identify Information Inputs) states, “Confirmation soil and sediment sampling and laboratory analysis will be conducted following excavation and site grading;” however, it is unclear why confirmation sampling would occur after site grading to ensure contamination is not relocated during site grading. Further, it is unclear why radiological scans and compaction verification are included in Step 4 rather than in Step 3. Radiological scans also should be conducted prior to site grading. Please revise Appendix B to require confirmation sampling, radiological scanning, and compaction verification prior to site grading.
12. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, Page 36:** Step 4 (Define the Boundaries of the Study) indicates that field activities and sampling are scheduled to

start in early 2016 and are anticipated to take 26 months to complete; however, Section 5.2.2 (Construction Activities and Proposed Schedule) of Appendix D (Draft Environmental Protection Plan) indicates that the estimated duration of field activities is approximately 22 months, with a completion date of April 2018. It should be noted that Figure 11 (Project Schedule) indicates that field work will take approximately 27 months (December 16, 2015 through March 20, 2018). Please revise the Draft Work Plan to present consistent information regarding the duration of field activities.

13. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #14, Summary of Project Tasks, Section 14.1, Scope of Work, Page 41:** The third bullet states, “Chemical confirmation soil sampling in the freshwater and tidal wetlands and in hot spot areas as directed by the Navy;” however, it is unclear how the confirmation sampling will be directed by the Navy and if this direction will deviate from the information presented in SAP Worksheets #11 (Project Quality Objectives/Systematic Planning Process Statements) and #17 (Sampling Design and Rationale). Please revise SAP Worksheet #14 to require that the SAP be followed or explain why the Navy would deviate from the SAP and how these changes will be communicated to the Regulatory Agencies.
14. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #15.1, Reference Limits and Evaluation Table - Soil/Sediment (Soil Matrix), Pages 52 to 54:** It is unclear why several hot spot tiers include analytes that are not identified for analysis during this project (i.e., heptachlor epoxide, zinc, 1,1-dichloroethane, tetrachloroethene, trichloroethene, and vinyl chloride are not identified in Worksheet #11, Steps 2 and 3). Please revise the SAP to clarify if these analytes will be included in the confirmation soil sampling or remove these analytes from Worksheet #15.
15. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #15, Reference Limits and Evaluation Tables, Pages 58 to 64:** Several analytes do not have PALs listed and it is unclear how results for these compounds will be evaluated. Please revise the SAP to discuss how results for compounds without PALs will be evaluated.
16. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #16, Project Schedule/Timeline Table:** SAP Worksheet #16 lacks sufficient detail. Specifically, the level of detail provided in SAP Worksheet #16 significantly varies from Figure 11 (Project Schedule) where individual project tasks are provided as line items. Please revise SAP Worksheet #16 to provide the level of detail included in Figure 11.
17. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #18, Sampling Locations and Methods/Standard Operating Procedures Requirements Table, Page 73:** The depths for the freshwater wetland and tidal wetlands excavation areas are not provided. Also, it is unclear why these depths are not the exposed surface after excavation similar to the depth provided for Parcel E-2 on Page 74. Please revise SAP Worksheet #18 to provide the depths for the freshwater wetland and tidal wetlands excavation areas.

18. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #19, Analytical Standard Operating Procedures Requirements Table, Pages 76 to 78:** The holding time information for soil samples to be analyzed for total petroleum hydrocarbons in the gasoline range (TPH-G) and VOCs that will be preserved or frozen is insufficiently detailed. The holding time for these samples is indicated to be 48 hours for unpreserved samples or 14 days if the sample is preserved or frozen. In addition, the table indicates the samples may be frozen for 7 days upon receipt at the laboratory. However, the table should indicate that samples must be extruded from the EnCore devices into vials within 48 hours and then frozen or preserved to extend the holding time to 14 days. In addition, the type of preservative should be specified. Please revise this table to provide information for how the samples will be preserved or frozen, including the containers and preservatives that will be used.
19. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #27, Section 27.2, Sample Labeling, Page 99:** The sampling identification scheme is not provided for the backfill, waste characterization, and QC samples. In addition, the sample identifications presented in Worksheet #18 are inconsistent with the scheme defined in Section 27.2 (e.g., the "R" in the radiological sample identifications and the "BI" in the biased radiological sample identifications in Worksheet #18 are not defined). Please revise this section to provide the sample identification scheme for all proposed samples and QC samples, and ensure this information is consistent with the sample identifications presented in Worksheet #18.
20. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #28.1, Laboratory Quality Control Samples Table (EPA 8015), Page 103:** Worksheet #15 indicates the laboratory will report limits of quantitation (LOQs), but the MPC for the TPH method blank is defined relative to the reporting limit. In addition, a method detection limit (MDL) study is listed for TPH and metals, but Worksheet #15 indicates levels of detection and detection limits will be reported. Please revise the SAP to use consistent terms for the proposed detection and reporting limits.
21. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #28.1, Laboratory Quality Control Samples Table (EPA 8015), Pages 103 to 104:** This table does not include matrix spike/matrix spike duplicates (MS/MSDs) for the analyses of TPH-G and TPH-diesel range (D) in soil, but Worksheet #20 indicates MS/MSDs will be collected. Please revise this table to include MS/MSDs.
22. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #28.5, Laboratory Quality Control Samples Table (EPA 7471), Pages 115 to 117:** This table lists method blanks and laboratory control samples [LCS]/LCS duplicates [LCSD] twice with different acceptance limits and MPC. Please revise this table to remove the extraneous information.
23. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #29, Project Documents and Records Table, Page 120:** This table indicates that data validation reports (DVRs) will be generated, but it is unclear what information will be included in

the DVRs. Please revise the SAP to ensure that DVRs will present a discussion of all QC parameters evaluated, the acceptance criteria used to evaluate each QC parameter, a list of all QC exceedances as well as the extent of the exceedance, the samples associated with each exceedance, and the qualifiers applied.

24. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #37, Section 37.1, Data Quality Assessment, Page 131:** The discussion of the information to be included in the data quality assessment (DQA) report is incomplete and insufficiently detailed. For example, the topics to be discussed in the report do not include the sensitivity of the results (i.e., if detection limits were below PALs), and it is unclear if trends and biases in the QC results will be evaluated and discussed in the DQA report. Further, it is unclear if the DQA report will simply summarize the data usability conclusions, or if the DQA report will discuss how data quality indicators (DQIs), biases and trends in the QC results, and data usability for project decisions were evaluated along with sufficient information to support the data usability conclusions. Please revise Section 37.1 to indicate that DQIs, biases and trends in the QC results, and data usability for project decisions will be discussed in the DQA report with sufficient information to support the data usability conclusions.
25. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #37, Section 37.2, Data Quality Indicators, Pages 131 to 133:** The evaluations of precision and accuracy discuss only certain QC checks (i.e., LCS/LCSD and MS/MSDs for precision, and MS, MSD, LCS, and surrogates for accuracy). However, it is unclear if the precision and accuracy of the other validation parameters will be assessed (e.g., calibrations, internal standards, serial dilutions, post-digestion spikes, etc.). Please revise this worksheet to indicate that all of the applicable validation QC checks will be evaluated.
26. **Appendix B, Draft Sampling and Analysis Plan, SAP Worksheet #37, Section 37.2.5, Completeness, Page 133:** The calculation for completeness indicates that the amount of acceptable data will be compared to the total amount of results obtained. However, completeness should be calculated relative to the total amount of results planned in order to account for results that were not able to be obtained (e.g., sample breakage, inability to collect a sample, etc.). Please revise this worksheet to indicate completeness will be calculated based on the number of planned results.
27. **Appendix C, Draft Waste Management Plan, Section 3.1, Solid Wastes, Page 3-1:** Section 3.1 of Appendix C indicates that refuse and debris, including grubbed material, may represent low-level radioactive waste (LLRW) or low-level mixed waste (LLMW); however, Section 3.3 (Anticipated Waste Streams) of the main text does not include refuse and debris, including grubbing material, as LLRW or LLMW. Please revise the Draft Work Plan to address this discrepancy and present consistent information.
28. **Appendix C, Draft Waste Management Plan, Section 4.5, Transportation, Page 4-2:** Section 4.5 of Appendix C states, "Prior to leaving HPNS, each loaded truck will be tarped and decontaminated (if required);" yet the situations where tarping and decontamination would not be necessary are not discussed. In addition, the decision

criteria that will be used to make this determination is not provided and/or referenced. Please revise Appendix C to require tarping and decontamination or clarify the situations where tarping and decontamination would not be necessary prior to leaving Hunters Point. In addition, please revise Appendix C to provide the decision criteria that will be used to make this determination.

29. **Appendix D, Draft Environmental Protection Plan, Section 4.1, Spill Prevention, Page 4-1:** The first bullet in Section 4.1 of Appendix D indicates that on-site fueling of equipment will be conducted within a designated and controlled area; however, Figure 4 (Construction Site Layout) does not designate an area for on-site fueling of equipment. It should be noted that Section 5.2.2.5 (Fueling of Construction Equipment) indicates that, “Construction equipment refueling operations will be conducted in one or more designated areas located at least 100 feet from surface water bodies.” Please revise the Draft Work Plan to clarify where the on-site fueling of equipment will be conducted.
30. **Appendix D, Draft Environmental Protection Plan, Section 4.1, Spill Prevention, Page 4-1:** The second bullet in Section 4.1 of Appendix D indicates that wastewater will be stored in temporary tanks or 55-gallon drums within a secondary containment area; however, Figure 4 (Construction Site Layout) does not designate these secondary containment areas. In addition, a construction detail is not provided and/or referenced for the secondary containment structures. Please revise the Draft Work Plan to clarify where these areas are located. In addition, please revise the Draft Work Plan to include a construction detail for the secondary containment structures.
31. **Appendix D, Draft Environmental Protection Plan, Section 6.2, General Construction Dust Control Methods, Page 6-2:** The sixth bullet of Section 6.2 of Appendix D states that, “Water will be applied as needed to control visible dust;” however, the text does not indicate who will be making the decision that visible dust is present and water need be applied. The qualifications of the individual are not provided nor is the frequency with which the individual will make observations to determine whether visible dust is present. Please revise Appendix D to clarify who will be making the decision that visible dust is present and water need be applied. Also, please revise Appendix D to provide the qualifications of the individual and the frequency of the observations to determine whether visible dust is present.
32. **Appendix D, Draft Environmental Protection Plan, Section 6.2.1.1, Track-Out Prevention, Page 6-2:** Section 6.2.1.1 indicates that tires will be free of mud or loose soil prior to leaving the site egress; however, the text does not discuss the management and disposal of this mud/loose soil. In addition, the location where the tires will be freed of mud or loose soil is not included on Figure 4 (Construction Site Layout). Please revise Appendix D to include information regarding the management and disposal of the mud or loose soil removed from vehicle tires. In addition, please revise Figure 4 to indicate where tires will be freed of mud or loose soil.
33. **Appendix E, Draft Environmental Protection Plan, Section 8.3, Final Acceptance Inspection, Page 8-1:** Section 8.3 of Appendix E states, “The PQCM [Project Quality

Control Manager], Project Superintendent, and others deemed necessary will be present during the inspection with the Navy;” however, the text does not clarify why the regulators [e.g., EPA, California DTSC, California Department of Public Health, and the RWQCB – San Francisco Bay Region] are not listed as potential final acceptance inspection attendees. Please revise Section 8.3 of Appendix E to clarify why the regulators are not listed.

## **MINOR COMMENT**

- 1. Section 7.3, Upland Slurry Wall and French Drain, Page 7-12 and Section 7.3.1, Upland Slurry Wall, Page 7-12:** Section 7.3 indicates that the nearshore slurry wall “will be installed” in 2015; however, the nearshore slurry wall has already been constructed and it is 2016. Similarly, Section 7.3.1 states that the upland slurry wall will be installed using the same CB slurry approach proposed for the nearshore wall at Parcel E-2; however, the nearshore wall at Parcel E-2 has already been constructed and therefore the text should state that CB slurry approach, for the nearshore wall at Parcel E-2 should be used for the upland slurry wall. Please revise the Draft Work Plan to address these discrepancies.